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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/527,917

10/14/2005

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07/20/2009

EXAMINER

CAZAN, LIVIUS RADU

ART UNIT

PAPER NUMBER

3729

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/527,917	<b>Applicant(s)</b> RAU ET AL.	
	<b>Examiner</b> LIVIOUS R. CAZAN	<b>Art Unit</b> 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-13 and 15-23 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/12/09</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. The amendment filed on 2/2/2009 has been fully considered and made of record. Upon further review of the claims and the art of record, the indication of allowability is withdrawn and prosecution is hereby reopened.

#### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. **Claims 11-13, 15, and 17-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa (JP2001-231190A; also see the corresponding Machine Translation) in view of Adachi (US6317962, corresponding to JP9103052 cited by the Applicant).

4. Ozawa discloses (see Fig. 3 and para. [0021] of the Machine Translation) substantially the claimed invention, whereby a stator is formed of stacked laminations and a winding (15) is wound around stator teeth (14a). The stator is made of multiple pieces (14) which are laser-welded together. Ozawa discloses a welding depth  $c$  (i.e.  $T_s$ ) between 50% and 95% of  $a$  (i.e.  $H_{Yoke}$ ), from radially outside. (Note: this was confirmed by a Technical Translator from the Translations Branch, who stated "Paragraph 0021 states that laser welding is carried out in such a way that the welding depth  $c$  is 50-95% of the width  $a$ ."). In other words,  $c$  can, for example, be described as  $c = 0.5 \text{ mm} * (a/\text{mm} - 1) + \Delta T_s$ , where  $\Delta T_s = x + 0.5 \text{ mm}$ , and  $0 < x < 0.45a$ . Therefore, it is readily apparent that Ozawa teaches selecting the welding depth according to the claimed formula. Moreover, Ozawa discloses a value of  $a$  as 1.5 mm or less (see para.

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[0019]). For a value of  $a=1.5$  mm, for example,  $\Delta T_s$  would be 1 mm, if  $x$  is selected as  $a/3$ , and 0.5 mm if  $x$  is selected as 0. Ozawa discloses arranging the welding seam on a radial outside of the yoke (see Fig. 3).

5. However, Ozawa forms the stator from multiple pieces, rather than forming a subassembly which is thereafter bent into a circular fashion as claimed.

6. Adachi discloses substantially steps a-e of claims 11 and 19. See page 1, Ins. 5-19 of the present specification. See ln. 50 of col. 2 to ln. 20 of col. 3 of Adachi. The welding seam is disposed on a radial outside of the yoke at 51b in Fig. 1 of Adachi and also on an axial end of the stator core, to the extent an axis can pass through the end comprising the welding seam. The stator thus formed is for a generator (see col. 1, Ins. 5-10 of Adachi).

7. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Ozawa, in view of the teachings of Adachi, by utilizing a stator such as that of Adachi and forming a subassembly which is bent into a circular shape, as claimed, followed by welding as taught by Ozawa. One of ordinary skill in the art would have been motivated to do so because the type of stator taught by Adachi requires fewer welding seams, which reduces the probability of failure due to a weak weld.

8. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa and Adachi in view of Rich (US4102040).

9. Ozawa and Adachi disclose substantially the same invention as the Applicant, except for the welding seam being between two tooth halves, as claimed.

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10. Rich teaches placing a welding seam at such a location (see Figs. 6 and 8 for example).

11. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Ozawa and Adachi, in view of the teachings of Rich, by providing a welding seam as claimed since Rich teaches an alternative location for placing the seam, as known in the art.

***Allowable Subject Matter***

12. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LIVIUS R. CAZAN whose telephone number is (571) 272-8032. The examiner can normally be reached on M-F 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DERRIS H. BANKS can be reached on (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. Dexter Tugbang/  
Primary Examiner  
Art Unit 3729

/L. R. C./ 7/16/2009  
Examiner, Art Unit 3729